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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,207	03/02/2004	Hiroshi Yageta	Q80169	1039
<div>23373 7590 06/29/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037</div>			<div>EXAMINER MERCADO, JULIAN A</div> <div>ART UNIT PAPER NUMBER 1745</div> <div>MAIL DATE DELIVERY MODE 06/29/2007 PAPER</div>	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/790,207	<b>Applicant(s)</b> YAGETA ET AL.	
	<b>Examiner</b> Julian Mercado	<b>Art Unit</b> 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 and 10 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 7-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                                 |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                            | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: ____.                                                |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :2007-04-03, 2006-01-25, 2004-03-02.

## DETAILED ACTION

### *Information Disclosure Statement*

The Information Disclosure Statement (IDS) filed on April 3, 2007, January 25, 2006 and March 2, 2004 has been considered by the examiner with the following exceptions:

1. JP 2001-222986 and JP 2000-133216 have not been considered by the examiner, as these documents appear to be absent from the file. Please submit or resubmit copies of both references.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewin et al.

(U.S. Pat. 5,916,704).

For claim 1, Lewin et al. teaches a film covered battery comprising a battery element having a positive electrode and a negative electrode connected to respective and partially extending lead terminals [11] and [12], a flexible casing such as elongated foil, and a buffer [21a] formed in at least a portion of the casing for accumulating a gas generated within said

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casing through deformation of said casing, “layer 23 is moved away from base layer 21 to open venting gap 24 to vent the excessive gas, causing the pressure to rise, into the ambient atmosphere.” See col. 3 lines 41-50. As shown in Figures 2A, 2B and 3, the buffer is formed continuously with a region in which the battery element is accommodated.

For claim 2, the buffer comprises a margin of said casing for sealing said battery element including inner surfaces around “central aperture” [21] which directly oppose each other without intervention of the battery element and are not joined to each other.

For claims 3, the buffer is provided in at least a portion of the casing outside of the battery element in an in-plane direction on a main surface of said battery element, as shown by the cited Figures.

For claims 4 and 5, the casing has a recess for receiving the battery element, “[t]he battery is contained within sealed foil package container....” The buffer, i.e. “vent aperture 2” is positioned adjacent to the recess and is positioned such that the region for accommodating the battery element is not above the buffer in a posture in which said film covered battery is installed for use, insofar as the buffer is on the top portion of the casing. See col. 3 line 18 et seq. and the cited Figures.

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Naskali (U.S. Pat. 6,713,209 B1).

For claim 1, Naskali teaches a film covered battery comprising a battery element having a positive electrode and a negative electrode connected to respective and partially extending lead terminals [72] and [73], a flexible casing, i.e. “the battery shell is made of at least partly of a

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flexible material...”, and a buffer formed in at least a portion of the casing for accumulating a gas generated within said casing through deformation of said casing. See col. 2 lines 29-30, col. 4 lines 50-54 and Figure 6b which shows the direction of the “pressure” distension by arrows. Furthermore, as shown in Figures 6a and 6b, the buffer is formed continuously with a region in which the battery element is accommodated. See also col. 2 lines 25-28.

For claim 2, the buffer comprises a margin of said casing for sealing said battery element including inner surfaces indicated by arrows in Figure 6b (in reference to the aforementioned direction of “pressure”) which directly oppose each other without intervention of the battery element and are not joined to each other.

For claims 3, the buffer is provided in at least a portion of the casing outside of the battery element in an in-plane direction on a main surface of said battery element, as shown by the cited Figures.

For claims 4 and 5, the casing has a recess for receiving the battery element, with the buffer positioned adjacent to the recess and positioned such that the region for accommodating the battery element is not above the buffer in a posture in which said film covered battery is installed for use. See the cited Figures, specifically Figure 6b which shows the buffer alongside the battery element.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naskali (U.S. Pat. 6,713,209 B1) in view of either Komatsu (U.S. Pat. 6,797,429 B1) or Tura et al. (U.S. Pat. 5,419,982).

The teachings of Naskali are discussed above.

For claim 6, as to a battery assembly comprising a plurality of film covered batteries according to claim 1 being held in a pressurized state in a direction in which the film covered batteries are stacked, it is noted that this limitation is met by Naskali for the reasons detailed above.

For claim 6, Naskali does not explicitly teach a battery assembly comprising a plurality of film covered batteries according to claim 1. However, Komatsu teaches a plurality of batteries “stacked in series with or in parallel with each other....” See col. 21 line 13 et seq. Likewise, Tura et al. teaches “a single cell, or a plurality of cells connected in either series or parallel fashion to furnish electrical current.” See col. 4 line 9 et seq. The skilled artisan would find obvious to modify Naskali by employing a plurality of batteries in a battery assembly. The motivation for such a modification would be to provide “a high energy density battery without any unnecessary space” (Komatsu, ib.) and to form “a composite battery with increased voltage and energy.” (Tura et al. in col. 10 line 67 et seq.) It is noted that either modification results in the stack in a thickness direction of the battery element.

For claims 6 and 10, as to the battery assembly being installed in a posture in which the thickness direction of the battery element is oriented substantially in the horizontal direction, wherein the casing is not substantially provided with a region deformable by the pressure of a

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generated gas in a region at a level equal to or lower than the battery element when said battery assembly is installed, it is asserted that modification of Naskali as motivated by either Komatsu or Tura et al. would result in the claimed orientation, since the terminals which facilitates the series or parallel connection and buffer formed in at least a portion of the casing of Naskali are positioned in the topmost part of the battery element. That is, the region of the battery casing deformable by a generated gas is provided only above said battery element. (applies to claim 10)

#### *Allowable Subject Matter*

Claims 7-9 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest the instant invention regarding a battery assembly comprising a plurality of film covered batteries each of which comprises the claimed buffers above and below the battery element, with the lower buffer being limited in deformation. This configuration is understood by the examiner as best shown by Figure 4.

#### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Pat. 5,405,715 to Dawson et al. is cited of cumulative relevance.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



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